

**A B S T R A C T**

A turbo-compressor being driven by an electric motor has an inlet guide vane and a blow-off valve. The surge limit line of the compressor is amended depending upon seasonal changes of temperature and pressure of a working gas to be sucked into the compressor. Upon the basis of the surge limit line amended, the minimum opening of the inlet guide vane is altered, thereby reducing the driving power or force of the compressor.